

WHAT IS CLAIMED IS:

1. A process for depositing a silica coating upon a heated glass substrate comprising:
  - a) providing a heated glass substrate having a surface upon which the coating is to be deposited; and
  - b) directing a precursor mixture comprising a silane, an oxygen source, a radical scavenger, a phosphorous (V) compound and an inert carrier gas toward and along the surface to be coated, and reacting the mixture at or near the surface to form a silica coating on the surface of the glass substrate.
2. The process for depositing a silica coating upon a glass substrate as claimed in claim 1, wherein the phosphorous (V) compound comprises a phosphorous ester.
3. The process for depositing a silica coating upon a glass substrate as claimed in claim 1, wherein the phosphorous (V) compound comprises triethylphosphate.
4. The process for depositing a silica coating upon a glass substrate as claimed in claim 1, wherein the silane is monosilane.

5. The process for depositing a silica coating as claimed in claim 1, wherein the inert carrier gas comprises at least one of nitrogen and helium.
6. The process for depositing a silica coating as claimed in claim 1, wherein the radical scavenger is ethylene.
7. The process for depositing a silica coating as claimed in claim 1, wherein the oxygen containing material is oxygen gas.
8. The process for depositing a silica coating as claimed in claim 3, wherein the precursor mixture comprises about 0.1 to about 3.0 percent silane, about 0.4 to about 12.0 percent oxygen, about 0.6 to about 18.0 percent ethylene and about 0.1 to about 7.0 percent triethylphosphate, with the remainder comprising an inert carrier gas.
9. A coated glass article formed according to the process of claim 1.
10. The coated glass article according to claim 9, wherein the refractive index of the coating is between about 1.43 and about 1.59.

11. The coated glass article according to claim 9, wherein said coating has a thickness between about 100 and about 1500 Angstroms.
12. The coated glass article according to claim 9, wherein said coating comprises less than about 4 atomic percent phosphorous.
13. A process for depositing a silica coating upon a heated glass substrate comprising:
  - a) providing a heated glass substrate having a surface upon which the coating is to be deposited; and
  - b) premixing monosilane, oxygen, ethylene, triethylphosphate and an inert carrier gas to form a precursor mixture, directing the precursor mixture toward and along the surface to be coated, and reacting the mixture at or near the surface to form a silica coating on the surface of the glass substrate.